

reading a leading unit image group and a trailing image group which has a starting reference image approximately matching an ending reference image of the leading unit image group from said storage means and connecting the leading and trailing unit image groups.

17. (NEW) An image generating apparatus comprising:
an image generator generating a sequential character image by connecting a plurality of unit image groups which, respectively, represent an action and the plurality of unit image groups are guaranteed to indicate one communication information to a viewer; and
a display displaying said sequential character image.

REMARKS

STATUS OF CLAIMS

Claims 1-14 were pending, and stood rejected. By this Response, claims 1-9 have been amended and new claims 15-17 have been added. Therefore, claims 1-17 are now presented for consideration.

OBJECTION TO THE DRAWINGS

On Office Action page 2, numbered paragraph 3, Fig. 1 was objected to because the Examiner asserted it should be designated by a legend such as --Prior Art--. In view of the accompanying separate Letter to the Examiner Requesting Approval of Drawing Changes, a corrected drawing of Fig. 1, as suggested by the Examiner has been requested. Therefore, the outstanding drawing objection should be resolved. Reconsideration and withdrawal of the outstanding objection to the drawings are respectfully requested.

REJECTION UNDER 35 U.S.C. §102(e)

On Office Action page 2, numbered paragraph 5, claims 1-14 were rejected under 35 U.S.C. §102(e) as being anticipated by Kaneko (U.S. Patent No. 6,167,562). Reconsideration of the rejection is respectfully requested.

Kaneko discloses an apparatus for creating an animation program, which includes "animation management means for managing said entered image information by creating an

animation program in an image-drawing unit of drawing an image by sorting said multiple pieces of said entered image information in a time series". (See Kaneko, column 2, line 67 through column 3, line 4). In the Kaneko apparatus, for example, "[t]he character images acting as parts data for creating such animation programs are formed into the animation image information by integration of the relationship of the data of multiple pieces of the image information A". (See Kaneko, column 12, lines 4-7).

This means that the Kaneko apparatus basically corresponds to the prior art described in the specification on page 17, lines 9-21 and in the Kaneko apparatus, for example, each of the character images, does not ***represent a series of actions, but only represents a portion of an action***. For this reasons, a guarantee that the action, which is desired, is represented correctly is not possible, even if each of the individual images is connected. The debugging process of Kaneko, therefore requires confirmation of whether or not a specific action is visible to a viewer when each of the individual images are connected.

In contrast to Kaneko which includes "parts data for creating such animation programs", the present invention as recited, for example, in claim 1 includes at least "a sequential character image by connecting a plurality of unit image groups which are respectively defined and guaranteed to indicate one communication information to a viewer". In particular, the series of actions are formed as a component, and the components are stored.

Therefore, when creating or editing an action image, the stored component images are read and connected. Since the series of actions, are formed in advance as the component image, it is unnecessary to confirm whether or not the action indicated by the component image appears unnatural. In other words, unlike the conventional debugging process, a debugging process of one preferred embodiment of the present invention does not require confirmation of whether or not the action is visible to the viewer when viewing the series of actions indicated by the component image.

Accordingly, neither Kaneko nor any other cited prior art either taken alone or in combination discloses or suggests at least the above-mentioned recitation of claim 1 of "a sequential character image by connecting a plurality of unit image groups which are respectively defined and guaranteed to indicate one communication information to a viewer", which produces unit image groups, respectively, guaranteed to indicate one communication information to the viewer.

Therefore, claim 1 patentably distinguishes over the cited prior art for at least the above-mentioned reasons and should be allowable. Claims 3-8, 15 and 17, which include the following

recitations, should be allowable for at least similar reasons as claim 1. Claim 3 includes the identical recitation. Claim 4 recites "a database storing unit component images respectively representing a series of actions, each of said unit component images being defined and guaranteed to indicate one communication information to a viewer". Claim 5 recites "a database storing unit image groups respectively representing an action of a character and made up of a plurality of images, in correspondence with attribute information defining each action, each of said unit image groups being defined and guaranteed to indicate one communication information to a viewer". Claim 6 recites "a data retrieving part causing the computer to selectively search and read unit component images stored in a database which stores unit component images respectively representing a series of actions, each of said unit component images being defined and guaranteed to indicate one communication information to a viewer and being made up of a plurality of images including a starting image and an ending image of an action of a character". Claim 7 recites "a retrieving part causing the computer to read a unit image group corresponding to input attribute information from a database, based on the input attribute information, said database storing unit image groups respectively representing an action of a character and made up of a plurality of images, in correspondence with attribute information defining each action, each of said unit image groups being defined and guaranteed to indicate one communication information to a viewer". Claim 8 recites "image generating means for generating a sequential character image by connecting a plurality of unit image groups which are respectively defined and guaranteed to indicate one communication information to a viewer". Claim 15 recites "defining communication information, which guarantees to indicate the communication information to a viewer". Claim 17 recites "an image generator generating a sequential character image by connecting a plurality of unit image groups which, respectively, represent an action and the plurality of unit image groups are guaranteed to indicate one communication information to a viewer". Claim 2 and 16, which depend directly from claim 1 and 15, should be allowable for at least the same reasons as claims 1 and 15, as well as additional recitations therein. Reconsideration of the rejection is respectfully requested.

Furthermore, claim 9 includes at least the recitation "sequence generating means for generating an operation sequence by connecting a plurality of picture scenes of the character image generated by said image generating apparatus, by treating the character image in units of significance spaces corresponding to one picture scene from a point in time when a switching of one picture of the character image occurs to a point in time when a next switching of one picture occurs", which Kaneko does not disclose or suggest. In particular, Kaneko does not disclose or

suggest at least the generation of an operation sequence using the above-mentioned significance spaces.

The Examiner, in the Office Action asserted that “[d]ue to the similarity of claims 3-14 to claims 1-2, they are rejected with a similar rationale.” However claims 9-14 at least include the above mentioned recitation of the generation of the operation sequence using particular significance spaces, which, for example, corresponds to one picture scene from a point in time when a switching of one picture occurs to a point in time when a next switching of one picture occurs” and, for example, includes methods 711, 712, 713 and 714 corresponding to a character display, to an audio reproduction, to a cooperation process between the character display and the audio reproduction and to a user input/output, respectively. (See specification at page 38, lines 10-20 and Fig 22). Each of the significance spaces is defined as an object at least including a method corresponding to a character display and a method corresponding to a user input and/or output (see claim 13).

Accordingly, neither Kaneko nor any other cited art either taken alone or in combination discloses or suggests at least the above-mentioned recitation of claim 9, which at least includes the generation of an operation sequence using the significance spaces and which produces the beneficial result of easily creating and editing the operation sequence (see specification at page 9, lines 3-4), for example, of an ATM machine.

Therefore, claim 9 patentably distinguishes over the cited prior art for at least the above-mentioned reasons and should be allowable. Claims 11 and 13, which include the following recitations, should be allowable for at least similar reasons as claim 9. Claim 11 recites “sequence generating means for causing the computer to generate an operation sequence by connecting a plurality of picture scenes of a character image, by treating the character image in units of significance spaces corresponding to one picture scene from a point in time when a switching of one picture of the character image occurs to a point in time when a next switching of one picture occurs”. Claim 13 recites “a character image stored in units of significance spaces corresponding to one picture scene from a point in time when a switching of one picture of the character image occurs to a point in time when a next switching of one picture occurs, and each of said significance spaces is defined as an object at least including a method corresponding to a character display and a method corresponding to a user input and/or output.” Claims 10, 12 and 14, which depend directly from claims 9, 11 and 13, should be allowable for at least the same reasons as claims 9, 11 and 13, as well as additional recitations therein. Reconsideration of the rejection is respectfully requested.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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Date: 3/5/02

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 1-9 have been amended, The remaining pending claims are provided below in their entirety for the expediency and the convenience of the Examiner.

1. (ONCE AMENDED) An image generating apparatus comprising:
image generating means for generating a sequential character image by connecting a plurality of unit image groups which are respectively defined and guaranteed to indicate one communication information to a viewer; and
display means for displaying said sequential character image.
2. (ONCE AMENDED) The image generating apparatus as claimed in claim 1,
which further comprises:
storage means for storing a plurality of said unit image groups,
said storage means storing a plurality of kinds of unit image groups having mutually different starting reference images and ending reference images with respect to [the] a same communication information,
said image generating means reading a leading unit image group and a trailing image group which has a starting reference image approximately matching an ending reference image of the leading unit image group from said storage means and connecting the leading and trailing unit image groups.
3. (ONCE AMENDED) A computer-readable storage medium which stores a program for causing a computer to generate a sequential character image, comprising:
image generating means for causing the computer to generate a sequential character image by connecting a plurality of unit image groups which are respectively defined and guaranteed to indicate one communication information to a viewer; and
display means for causing the computer to display said sequential character image.
4. (ONCE AMENDED) An image generating apparatus which generates a motion picture, comprising:
a database storing unit component images respectively representing a series of actions,

each of said unit component images being defined and guaranteed to indicate one communication information to a viewer and being made up of a plurality of images including a starting image and an ending image of an action of a character;

a data retrieving part selectively searching and reading the unit component images stored in said database; and

a connecting part connecting an end image of a first unit component image read by said data retrieving part and a starting image of a second unit component image read by said data retrieving part.

5. (ONCE AMENDED) An image generating apparatus for generating a motion picture, comprising:

a database storing unit image groups respectively representing an action of a character and made up of a plurality of images, in correspondence with attribute information defining each action, each of said unit image groups being defined and guaranteed to indicate one communication information to a viewer;

a retrieving part reading a unit image group corresponding to input attribute information from said database, based on the input attribute information; and

editing means for editing the unit image group read by said retrieving part.

6. (ONCE AMENDED) A computer-readable storage medium which stores a program for causing a computer to generate a motion picture, comprising:

a data retrieving part causing the computer to selectively search and read unit component images stored in a database which stores unit component images respectively representing a series of actions, each of said unit component images being defined and guaranteed to indicate one communication information to a viewer and being made up of a plurality of images including a starting image and an ending image of an action of a character; and

a connecting part causing the computer to connect an end image of a first unit component image which is caused to read by said data retrieving part and a starting image of a second unit component image which is caused to read by said data retrieving part.

7. (ONCE AMENDED) A computer-readable storage medium which stores a program for causing a computer to generate a motion picture, comprising:

a retrieving part causing the computer to read a unit image group corresponding to input attribute information from a database, based on the input attribute information, said database storing unit image groups respectively representing an action of a character and made up of a plurality of images, in correspondence with attribute information defining each action, each of said unit image groups being defined and guaranteed to indicate one communication information to a viewer; and

editing means for causing the computer to edit the unit image group caused to read by said retrieving part.

8. (ONCE AMENDED) An image generating apparatus comprising:
image generating means for generating a sequential character image by connecting a plurality of unit image groups which are respectively defined and guaranteed to indicate one communication information to a viewer;
display means for displaying the sequential character image; and
control means for controlling a device depending on a motion of the sequential character image.

9. (ONCE AMENDED) An image generating apparatus comprising:
sequence generating means for generating an operation sequence by connecting a plurality of picture scenes of [the] a character image generated by said image generating apparatus, by treating the character image in units of significance spaces corresponding to one picture scene from a point in time when a switching of one picture of the character image occurs to a point in time when a next switching of one picture occurs,
each of said significance spaces being defined as an object at least including a method corresponding to a character display and a method corresponding to a user input and/or output.

10. (AS UNAMENDED) The image generating apparatus as claimed in claim 9, wherein said sequence generating means includes means for calling a corresponding data file by searching a database based on a retrieval key specified by each method.

11. (AS UNAMENDED) A computer-readable storage medium which stores a program for causing a computer to generate an operation sequence, comprising:
sequence generating means for causing the computer to generate an operation

sequence by connecting a plurality of picture scenes of a character image, by treating the character image in units of significance spaces corresponding to one picture scene from a point in time when a switching of one picture of the character image occurs to a point in time when a next switching of one picture occurs,

each of said significance spaces being defined as an object at least including a method corresponding to a character display and a method corresponding to a user input and/or output.

12. (AS UNAMENDED) The computer-readable storage medium as claimed in claim 11, wherein each of said significance spaces further includes at least one of a method corresponding to audio reproduction, a method corresponding to a cooperation process of the character display and the audio reproduction, and a method corresponding to a background image.

13. (AS UNAMENDED) A database comprising:
a character image stored in units of significance spaces corresponding to one picture scene from a point in time when a switching of one picture of the character image occurs to a point in time when a next switching of one picture occurs, and each of said significance spaces is defined as an object at least including a method corresponding to a character display and a method corresponding to a user input and/or output.

14. (AS UNAMENDED) The database as claimed in claim 13, wherein an operation sequence is generated by connecting a plurality of picture scenes of the character image, and data files of the character image stored in the database are searched based on retrieval keys specified by each of methods.

15. (NEW) An image generating method to generate a motion picture, comprising:
defining communication information, which guarantees to indicate the communication information to a viewer;
generating a sequential character image by connecting a plurality of unit image groups which, respectively, indicate the communication information to a viewer; and
displaying said sequential character image.

16. (NEW) The image generating method as claimed in claim 15, which further comprises:

storing a plurality of said unit image groups,

storing a plurality of kinds of unit image groups having mutually different starting reference images and ending reference images with respect to a same communication information,

reading a leading unit image group and a trailing image group which has a starting reference image approximately matching an ending reference image of the leading unit image group from said storage means and connecting the leading and trailing unit image groups.

17. (NEW) An image generating apparatus comprising:

an image generator generating a sequential character image by connecting a plurality of unit image groups which, respectively, represent an action and the plurality of unit image groups are guaranteed to indicate one communication information to a viewer; and

a display displaying said sequential character image.